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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,232

07/13/2006

Philip Fletcher

687-144

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23117

7590

06/24/2009

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EXAMINER

WANG, CHUN CHENG

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/24/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,232	<b>Applicant(s)</b> FLETCHER ET AL.	
	<b>Examiner</b> Chun-Cheng Wang	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-28,31,36-39 and 44-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-28,31,36-39 and 44-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is in response to the Amendment filed on 03/05/2009. Claims 5, 29-30, 32-35, 37, 40-43 and 50 have been canceled. Claims 1-4, 6-28, 31, 36-39 and 44-49 are now pending.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this section can be found in a prior Office Action.

#### ***Claim Rejections - 35 USC § 103***

4. Claims 1-4, 6-10, 15-27, 38-39 and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433).

The rejections stand as per the reasons set forth in paragraph 6-34 of the previous Office Action, incorporated herein by reference.

Regarding the newly added limitation of claim 1: Although Chirinos et al. is silent on the treatment fluid formulation is initially contacted with the viscous composition in the fluid flow path at or downstream of a producing face of a subterranean formation.

Chirinos et al. teach HIPR emulsions of highly viscous oils in water are frequently as much as three to four orders of magnitude less viscous than the oil itself and consequently are much easier to pump through a pipeline and require considerably less energy to do so (column 4, lines 12-23). The emulsions, particularly when diluted, are suitable for transportation through a pipeline and represent an elegant solution to the problem of transporting viscous oils (column 4, lines 52-54).

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The emulsions reduce the viscosity of viscous oil that required less energy to transport through pipeline. In light of such benefit, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to introduce the formulations into the viscous oil pipeline in the earliest stage possible.

5. Claims 11-12 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433).

The rejections stand as per the reasons set forth in paragraph 36-41 of the previous Office Action and paragraph 4, incorporated herein by reference.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433).

The rejections stand as per the reasons set forth in paragraph 42-44 of the previous Office Action and paragraph 4, incorporated herein by reference.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433).

The rejections stand as per the reasons set forth in paragraph 45-48 of the previous Office Action and paragraph 4, incorporated herein by reference.

8. Claims 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433) in view of Hoskin et al. (US4896723).

The rejections stand as per the reasons set forth in paragraph 49-52 of the previous Office Action and paragraph 4, incorporated herein by reference.

9. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433) in view of Hoskin et al. (US4896723).

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The rejections stand as per the reasons set forth in paragraph 53-55 of the previous Office Action and paragraph 4, incorporated herein by reference.

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chirinos et al. (US 5641433) in view of England et al. (US2002/0128374 A1).

The rejections stand as per the reasons set forth in paragraph 56-58 of the previous Office Action and paragraph 4, incorporated herein by reference.

***Response to Arguments***

11. Applicant's arguments filed 03/05/2009 have been fully considered but they are not persuasive.

12. Applicant alleged: "Chirinos does not disclose reducing the viscosity "of a viscous composition which is arranged to flow along a fluid flow path". ... there is no initial contact ... "at or downstream of a producing face of a subterranean formation"".

Response: Since the formulation is capable of reducing the viscosity of viscous oil, regardless of the oil location, and mixing is effected under low shear conditions in the range 10 to 1,000 reciprocal seconds in such manner that an emulsion is formed, it is obvious to have the formulation contact with the viscous oil in the earliest stage possible for easy oil transportation.

13. Applicant alleged: "the presently claimed invention requires ... preferred embodiments comprises polyvinylalcohol. While Chirinos states (column 3, lines 55 et seq.) that certain polymers selected from polyvinylalcohol, polyethylene oxide, polyvinylpyrrolidone and polysaccharide biopolymers may be added ... to overcome a "salt tolerance problem."

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Response: Chirinos et al. disclose polyvinylalcohol in the preferred embodiment (claim 9). The formulation is to reduce viscosity of viscous oil and having the advantage of solving salt tolerance problem.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Cheng Wang whose telephone number is (571)270-5459. The examiner can normally be reached on Monday to Friday w/alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/  
Primary Examiner, Art Unit 1796

/Chun-Cheng Wang/  
Examiner, Art Unit 1796

/CCW/